

# Notice of Allowability

Application No.

10/051,640

Examiner

Donald Young

Applicant(s)

GONG, YIFAN

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 21, 2005.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. In response to the Office Action mailed on August 9, 2005, applicant(s) submitted an amendment filed on November 21, 2005, in which the applicant(s) amended claims 1-17. Claim 17 is cancelled and claims 1-16 are pending in this letter.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert C. Troike on 01/06/06. Robert Troike has granted the office permission to replace "the" with --a-- in claim 1 on line 9 between the words "over" and "clean." The office is also granted permission to replace "the" with --a-- in claim 6 on line 25 between the words "of" and "training", also on line 27 of the same claim replace "the" with --a-- between the words "over" and "clean." The office is again granted permission to replace "the" with --a-- in claim 11 on line 17 between the words "of" and "training."

***Response to Arguments***

2. Applicant's arguments, filed November 21, 2005 have been fully considered and are persuasive. The 35 U.S.C. 101 rejection of claims

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1-17 has been withdrawn. The objections to claims 4, 9 and 14 have been withdrawn. The objection to the specification has also been withdrawn.

***Allowable Subject Matter***

3. Claims 1-16 are allowed.

The following is an examiner's statement of reasons for allowance:

As for independent claims 1, 6, 11 and 16, they recite a method and speech recognizer device comprising calculating the MFCC vector, calculating an estimate of the background noise vector, calculating the model mean vectors adapted to noise and removing the model mean vectors adapted to noise to get the target model. Prior art such as Shozakai discloses a similar method but fails to teach the recited method wherein the first step includes calculating the mean mel-scaled cepstrum coefficients, calculating the model mean vectors that have been adapted to the background noise and removing the noisy data mean vector from the model mean vectors to get the desired target model. It is known in the prior art to remove the distorted noise from the input model to get the target model. See e.g., Hirsch, Yamamoto et al., and Shozakai et al. However, the prior art does not disclose or suggest calculating these quantities with these equations.

**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Young whose telephone number is (571) 272-8134. The examiner can normally be reached on 8:30 a.m. to 5:00 p.m. Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DGY

01/06/2006

  
**RICHEMOND DORVIL**  
**SUPERVISORY PATENT EXAMINER**